

## CLAIMS

What is claimed is:

- 1 1. A method comprising:
  - 2 determining a maximum sustainable power level for an integrated circuit based
  - 3 upon characteristic data;
  - 4 translating the maximum sustainable power level into a maximum performance
  - 5 characteristic; and
  - 6 adjusting operation of the integrated circuit such that the maximum performance
  - 7 characteristic is not exceeded.
- 1 2. The method of claim 1, wherein determining a maximum sustainable power level  
2 for the integrated circuit based upon environmental characteristics further comprises  
3 determining a maximum sustainable power level for the integrated circuit based upon  
4 thermal environment characteristics of a system containing the integrated circuit.
- 1 3. The method of claim 2, wherein the thermal characteristics are stored within a  
2 BIOS.
- 1 4. The method of claim 1, wherein determining a maximum sustainable power level  
2 for the integrated circuit based upon environmental characteristics further comprises  
3 determining a maximum sustainable power level for the integrated circuit based upon  
4 design characteristics of the integrated circuit.

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1 5. The method of claim 4, wherein the design characteristics are stored within the  
2 integrated circuit.

1 6. The method of claim 1, wherein the integrated circuit comprises a memory  
2 module.

1 7. The method of claim 6, wherein the memory module comprises a RDRAM  
2 memory module.

1 8. The method of claim 1, wherein the maximum performance characteristic  
2 comprises a maximum allowable data transfer rate.

1 9. The method of claim 8, wherein adjusting operation of the integrated circuit  
2 further comprises:

3 monitoring an amount of data transferred to and/or from the integrated circuit;

4 and

5 reducing the amount of data transferred if the amount of data transferred results  
6 in a data transfer rate that exceeds the maximum allowable data transfer rate.

1 10. The method of claim 8, wherein adjusting operation of the integrated circuit  
2 further comprises determining an amount of time for which the maximum allowable data  
3 transfer rate may be sustained.

1 11. A apparatus comprising:  
2 first circuitry to:  
3 determine a maximum sustainable power level for an integrated circuit  
4 based upon environmental characteristics;  
5 translate the maximum sustainable power level into a maximum  
6 performance characteristic; and  
7 adjust operation of the integrated circuit such that the maximum  
8 performance characteristic is not exceeded.

1 12. The apparatus of claim 11, wherein the environmental characteristics include  
2 integrated circuit design characteristics stored within the integrated circuit.

1 13. The apparatus of claim 11, wherein the environmental characteristics include  
2 thermal characteristics stored within the apparatus.

1 14. The apparatus of claim 11, wherein the integrated circuit comprises a memory  
2 module.

1 15. A system comprising:  
2 an integrated circuit; and  
3 a BIOS coupled to the integrated circuit to:  
4 determine a maximum sustainable power level for the integrated circuit  
5 based upon environmental characteristics,

6                   translate the maximum sustainable power level into a maximum  
7           performance characteristic, and  
8                   adjust operation of the integrated circuit such that the maximum  
9           performance characteristic is not exceeded.

1   16.   The system of claim 15, wherein the integrated circuit comprises a memory  
2   module having at least a portion of the environmental characteristics stored thereon.

1   17.   The system of claim 15, wherein the environmental characteristics include  
2   thermal characteristics of the system.

1   18.   The system of claim 15, wherein the maximum performance characteristic  
2   comprises a maximum allowable data transfer rate.

1   19.   An article of manufacture comprising a machine readable medium having a  
2   plurality of machine readable instructions stored thereon, wherein the instructions, when  
3   executed by a processor, cause the processor to:

4           determine a maximum sustainable power level for an integrated circuit based  
5   upon environmental characteristics;

6           translate the maximum sustainable power level into a maximum allowable data  
7   transfer rate;

8           adjust operation of the integrated circuit such that the maximum allowable data  
9   transfer rate is not exceeded.

1     20.     The article of manufacture of claim 19, further comprising instructions that, when  
2     executed by a processor, cause the processor to adjust operation of the integrated  
3     circuit by determining an amount of time for which the maximum allowable data transfer  
4     rate may be sustained.